

REMARKS

This Amendment and the following remarks are intended to fully respond to the Office Action mailed November 17, 2006. In that Office Action, claims 41, 43-50 and 52-58 were examined. Claims 43-49 and 52-58 were objected to because of informalities; claims 50 and 52-58 were rejected under 35 U.S.C. § 101 because the claimed invention, according to the Examiner, is directed to non-statutory subject matter; claims 41, 43-47, 50, and 52-56 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,792,605 to Roberts et al. (hereinafter, "Roberts"); claims 48 and 57 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Roberts, further in view of W3C's "Web Services Description Language," dated 3/15/2001 (hereinafter, "WSDL"); and claims 49 and 58 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Roberts, further in view of W3C's "Metadata Activity Statement," dated 5/8/2000 (hereinafter, "Metadata"). Reconsideration of these objections and rejections, as they might apply to the original and amended claims in view of these remarks, is respectfully requested.

In this Amendment, claims 41, 43, 47, 50, and 52-58 have been amended; no claims have been canceled; and no claims have been added. Therefore, claims 41, 43-50 and 52-58 remain present for examination.

Interview Summary

Applicants would like to thank Examiner Lesniewski for his time and cooperation in the telephonic interview held on February 12, 2007 with Applicants' Representatives, Elizabeth Reagan and Tadd Wilson. During the interview, the following topics were discussed: (1) a short summary of the present invention, as embodied in the claims; (2) the cited potential prior art and the differences between the present invention, as embodied in the claims, and the potential prior art; and (3) proposed claim amendments. After some discussion regarding how to clarify certain claim terms, a set of amended claims was agreed upon. The proposed claim amendments are as provided above in the amended claims. Again, Applicants would like to thank Examiner Lesniewski for his time and assistance.

Claim Objections

Claims 43-49 and 52-58 were objected to because of informalities. Specifically, the Examiner pointed out that claims 43-49 and 52-58 were dependent, as written, on cancelled claims. The Examiner stated that “[f]or the purpose of applying prior art it will be assumed that claims 43 and 47 depend on claim 41 and that claims 52 and 56 depend on claim 50.” *Office Action*, 11/17/2006, at 2. This presumption is correct, and the claims have been modified to so reflect. The Applicants thank the Examiner for bringing this to their attention. In light of the amendments presented above, the Applicants respectfully request reconsideration of the objection to claims 43-49 and 52-58.

Claim Rejections - 35 U.S.C. § 101

Claims 50 and 52-58 were rejected under 35 U.S.C. § 101 because the claimed invention, according to the Examiner, is directed to non-statutory subject matter. Specifically, the Examiner states that “‘a computer program data product’ does not constitute eligible subject matter for patentability. See MPEP 2106.IV.B.1.” *Office Action*, 11/17/2006, at 3. Claim 50, the independent claim from which claims 52-58 depend, has been amended to address the Examiner’s concerns to read: “A computer readable storage medium executable by a computing system and encoding instructions” *See supra*. The Examiner proposed this claim amendment during the Examiner Interview on February 12, 2007. The Applicants respectfully do not agree with the Examiner’s reasons for requiring this amendment because Applicants do not believe that such amendment is required to overcome the rejection, but Applicants have amended the claims as suggested by the Examiner in the interest of furthering this application to allowance. Claims 52-58 were likewise amended to address the Examiner’s concerns. Therefore, the Applicants respectfully request reconsideration of the rejection to claims 50 and 52-58 in light of the amendments presented herein.

Claim Rejections - 35 U.S.C. § 103: Claims 41, 43-47, 50, and 52-56

Claims 41, 43-47, 50, and 52-56 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Roberts. Applicants respectfully traverse the § 103(a) rejections

because the Examiner has either failed to state a prima facie case of obviousness or the claim amendments obviate the obviousness rejections. A prima facie case of obviousness can be established only when all of the following requirements are satisfied: (1) the reference or combination of references must teach or suggest all of the claim limitations; (2) there must be some suggestion or motivation in the references themselves to combine the references; and (3) there must be a reasonable expectation of success. *See* MPEP §§ 706.02(j) & 2143; *CFMT, Inc. v. YieldUp Int'l Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003); *see also* MPEP § 2143.03.

The present invention relates generally to providing a set of computing services to remotely executing client processes that execute upon a server connected to the client processes over a distributed communications network. In particular, the invention relates to providing a web-based processing service(s) to a remote client(s) over the Internet wherein a data processing object is generated by compiling source code to provide the processing service requested by the client. To exchange data between the server and the client for the data processing object, schema data is also generated. Once a data processing object is compiled for the first time, a web services library stores both the executable object and the corresponding data exchange schema data for subsequent requests of the web service. Upon obtaining a usable executable object from the web services library, the object is executed using the input data provided to service the request.

As noted, the present invention provides for compiling source code into an executable object for providing the processing service requested. Further, the invention provides for storing, in the web services library, the generated compiled executable object, and its corresponding generated schema data, for use in subsequent processing requests. When a requested web service is received and identified, a test module determines if a compiled version of the web service executable object is stored in the web services library. If the object is found in the library, the object is retrieved and activated and input arguments parsed from the payload body data are passed to the object. If a data processing object is not found in the library, the source code is compiled to generate an

executable object to be used to service the request and schema data is also automatically generated. Both the object and the schema data are then stored for subsequent requests.

Roberts relates generally to a web services system for accessing and using services and applications from multiple sources into a customized application. However, unlike the present invention, Roberts provides web service clients with a specific set of available published web services only and does not provide for compiling source code to generate an object for servicing a request which is not already available in its web services directory. Roberts' web services are limited only to those initially published in its directory:

The present invention provides a web services architecture, (referred to here as the 'system'). The system provides information (in one embodiment, in the form of metadata) about *web services that are available for use by web service consumers*. In the present invention, a web service *available for use* is said to be 'published' in a web services directory. . . . A web services directory is coupled to the web services engine 101 and *contains the published services that are available* to the system. . . . The operation of the system involves receiving a request via http interface 100, using the web services engine to interpret the request and determine what services are needed, using the web services directory to *identify services available to satisfy the request*, and to direct appropriate request to the appropriate services via service drivers.

Roberts, col. 4, l. 30 - col. 5, l. 18 (emphasis added).

Because Roberts does not provide for compiling source code, in the runtime, to generate an executable object for a particular processing service requested that is not available in its directory of pre-defined services, it necessarily does not provide for *storing* a compiled version of the executable object and its corresponding generated schema data. Thus, with respect to claims 41 and 50, Roberts fails to teach, among other elements, the following: "if the data processing object is not stored in the web services library, compiling the source code file to generate a data processing object, the data processing object providing the requested processing service;" or "storing both the data exchange schema data and the data processing object within the web services library for use by subsequent processing service requests."

As noted above, Roberts does not teach compiling source code to generate a data processing object because Roberts' directory contains only limited published services and the particular service drivers associated therewith. *See, e.g.*, Roberts, col. 3, ll. 27-32 ("The web services architecture maintains a *directory of services available* to provide processing [of] services . . . appropriate services are invoked by a web services engine *using service drivers associated with each service*" (emphasis added).) Thus, Roberts provides for a particular, and necessarily limited, class of web service drivers that is "*placed on the file system* and made accessible to the web services engine via file and URL access web services." *Id.* at col. 9, ll. 48-51 (emphasis added) (discussing a "special Java class file").

Because Roberts does not teach compiling source code into an executable object and generating corresponding schema data, it necessarily does not provide for storing either a generated object or generated schema data. Indeed, the Examiner agrees that "Roberts did not explicitly state storing the data exchange schema data within the web services library at the same time that the generated processing object is stored." *Office Action*, 11/17/2006, at 4 (emphasis added). However, the Examiner then states that "[s]ince the schema data is already stored at the time of storing the processing object, it would have been obvious to simply store the schema data later when storing the processing object, or restore the schema data with the data processing object. Thus, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Roberts by adding the ability to store the data exchange schema data within the web services library at the same time that the generated processing object is stored." *Id.*

However, the Applicants respectfully point out that the Examiner's analysis is flawed for several reasons. First, the Examiner has provided no documentary evidence to support the conclusion that it would have been obvious to store the schema data at the same time that the generated data processing object is stored. The Examiner's conclusory statement of obviousness is analogous to a position of "Official Notice." However, it is well-established that "[o]fficial notice unsupported by documentary

evidence *should only be taken* by the examiner where the facts asserted to be well-known, or to be common knowledge in the art are *capable of instant and unquestionable demonstration as being well-known*.” Manual of Patent Examining Procedure (“MPEP”), § 2144.03 (emphasis added). Contrary to the Examiner’s unsupported contention, the Applicants are aware of no common knowledge in the art that would “unquestionably” require the storage of data exchange schema data at the same time that a generated processing object is stored. The Applicants respectfully contend that the Examiner’s blanket statement of obviousness is erroneous and respectfully request that the Examiner produce competent and adequate authority for this statement.

Second, the Examiner’s contention of obviousness based on the combination of Roberts with the Examiner’s unsupported statement of common knowledge in the art is fundamentally flawed because the Examiner erroneously refers to Roberts as teaching the *generating* of a processing object. *See Office Action*, 11/17/2006 at 4 (“Roberts did not explicitly state storing the data exchange schema data within the web services library at the same time that the *generated* processing object is stored” (emphasis added)). As noted above, Roberts does not teach compiling the source code to generate a service driver for a particular requested processing service. As such, there is no generated processing object so there can be no subsequent storage of a generated object or of corresponding schema data. There is thus no support for the Examiner’s statement that “[i]t would have been obvious to one of ordinary skill in the art at the time of the applicant’s invention to modify the system of Roberts by adding the ability to store the data exchange schema data within the web services library at the same time that the *generated* processing object is stored.” *Office Action*, 11/17/2006 at 4 (emphasis added). Rather, Roberts provides only for a directory of limited, published web services and related executable objects. Roberts nowhere teaches: compiling source code into an executable object for a service requested; generating schema data corresponding to the generated executable object; storing the generated object; nor storing generated schema data with the storing of a generated executable object. Indeed, Roberts even teaches away from caching the service driver being used to execute service processing, stating:

The execute method of a service driver can perform a substantially limitless amount of functionality. The only prerequisite is that it eventually complete its processing and return control to the web services engine. Since some of the state information utilized by a web service driver is cached in the requester's session (*note the driver itself need not be cached*), other web services later interact with this session data. . . . In the web services architecture, *a web service represents an atomic unit of computing that runs its course, and shuts down*. Repeated interaction with the same session state is accomplished by having different web services connect to an existing session and interact with the state in some way. . . . It should be noted that *web services have a finite task defined in a single execute method in the service driver*.

Roberts, col. 10, ll. 21-45 (emphasis added).

Roberts thus fails to teach several elements of claims 41 and 50. Accordingly, there can be no prima facie case of obviousness for claims 41 and 50 because Roberts fails to teach or suggest every limitation of the claimed invention, and the Examiner's reliance on the common knowledge of those of ordinary skill in the art is inapposite given the discussion above and the lack of support for such a contention.

For at least the above reasons, Applicants respectfully request reconsideration of the rejections to claims 41 and 50. These claims are believed to be patentable. In addition, claims 43-47 and 52-56 are also believed to be patentable as these claims depend from the allowable base claims 41 and 50. Because the amendments and remarks above are believed to render the claims patentable, any remaining arguments supporting the claim rejections are not acquiesced to even though they are not directly addressed herein. Applicants reiterate that they do not agree that the references cited teach the present invention. Amendments to the claims are made in the interest of forwarding this application to allowance and are not necessarily made to address the Office Action's rejections based on the cited references.

Claim Rejections - 35 U.S.C. § 103: Claims 48 and 57

Claims 48 and 57 were rejected under § 103(a) as being unpatentable over Roberts further in view of WSDL. Claim 48 is dependent upon independent claim 41, and claim 57 is dependent upon independent claim 50. The Applicants respectfully

maintain that claims 41 and 50 are allowable base claims based on the arguments and amendments discussed above. Because Applicants respectfully maintain that claims 41 and 50 are allowable claims, claims 48 and 57 are also believed to be patentable over Roberts in view of WSDL because these claims depend from the allowable independent claims 41 and 50.

Claim Rejections - 35 U.S.C. § 103: Claims 49 and 58

Claims 49 and 58 were rejected under § 103(a) as being unpatentable over Roberts further in view of Metadata. Claim 49 is dependent upon independent claim 41, and claim 58 is dependent upon independent claim 50. The Applicants respectfully maintain that claims 41 and 50 are allowable base claims based on the arguments and amendments discussed above. Because Applicants respectfully maintain that claims 41 and 50 are allowable claims, claims 49 and 58 are also believed to be patentable over Roberts in view of Metadata because these claims depend from the allowable independent claims 41 and 50.

Conclusion

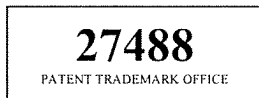
This Amendment fully responds to the Office Action mailed on November 17, 2006. Still, that Office Action may contain arguments and rejections that are not directly addressed by this Amendment due to the fact that they were rendered moot in light of the preceding arguments in favor of patentability. Hence, failure of this Amendment to directly address an argument raised in the Office Action should not be taken as an indication that the Applicants believe the argument has merit. Furthermore, the claims of the present application may contain other elements, not discussed in this Amendment, which are not shown, taught, or otherwise suggested by the art of record. Accordingly, the preceding arguments in favor of patentability are advanced without prejudice to other bases of patentability.

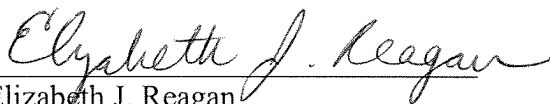
It is believed that no further fees are due with this Response. However, the Commissioner is hereby authorized to charge any deficiencies or credit any overpayment with respect to this patent application to deposit account number 13-2725.

In light of the above remarks and amendments, it is believed that the application is now in condition for allowance, and such action is respectfully requested. Should any additional issues need to be resolved, the Examiner is requested to telephone the undersigned to attempt to resolve those issues.

Respectfully submitted,

Date: February 16, 2007




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